THE HORTICULTURIST
EDITED BY
HENRY T. WILLIAMS.
E. SEARS, SC.

Vol. 25. APRIL, 1870. No. 286.

Among the Flowers.

BY ANNE G. HALE.

III.

Standard Parlor Plants.

THE notion that plants are injurious to health deters some persons from all attempts at cultivating them within doors. Others, with a slight knowledge of chemistry, say that the carbonic acid gas which they throw off during the night renders them especially deleterious to sleeping rooms, while, with certain restrictions, they admit them to parlors. All of these very foolishly deprive themselves and their friends of a wide source of enjoyment and improvement, as those most experienced in flower culture can testify. That they are not hurtful in the sick chamber, either by night or by day, the present writer had ample means of proving during the winter and spring of 1868–9, when she was held a prisoner seven months by heart disease, yet was not deprived of the society of her favorites, for her kind and intelligent physician made not the slightest objection to the two dozen and more plants that shared with her the sunshine and the starlight of her apartment, beguiling many a painful hour with their fragrance and beauty, and unfolding with their daily growth sure and sweet hopes of health and freedom.

The only way in which plants, or, rather, the culture of plants, can be considered injurious is in their injudicious management. Steady work at any other employment for a number of hours consecutively wears as much upon the energies as the daily attention required by a large collection of plants, and the frequent lifting of heavy weights would have the same effect as the lifting and moving of heavy flower pots. A lady of slender constitution, or, in delicate health, being fond of flowers may attempt the care of too many, or may not arrange them in a manner conducive to easy culture. But where hanging baskets, or stands with castors, and other conveniences for changing the position of plants are provided, and a reasonable number only are to be watered and trained and looked after generally, the cultivation of house plants may be considered an exceedingly healthy pursuit; while at the same time it leads to the highest intellectual and moral improvement, and furnishes the most exquisite and the purest means of enjoyment.

But so many new and strange species that are said to be adapted to house-culture, as well as new varieties of old and well-known plants, are annually brought forward by florists, that, in the multitude of diverse foliage and habits of growth, the endlessly varied tintings and shapes of bud and blossom—each with its individual texture and odor—we find much to crave; and greedily endeavor, too often, to possess,—realizing at last, after large

drafts upon our purse and our patience, that we have made great sacrifice of health and happiness, and gained, perhaps, a mortifying array of sickly, half-developed changelings, instead of the few bright and beautiful pets that we might have been proud to own.

And so the first word of advice to novices in floriculture is—select only those that have been thoroughly tested; that with small outlay of time and painstaking will prove remunerative in full foliage and ready flowering,—and but few of these. If you succeed with them, others of rarer and more difficult kinds may be safely added from time to time. But do not be too ambitious—be content with one good healthy plant whose wants and whose habits you study and supply, which, even if it be of the most ordinary sort, has under your care developed its highest capacities, and it will afford you greater pleasure than a dozen of meagre struggling things of which you know nothing save their high-sounding names.

If vines, both climbing and trailing, thrive under your care, and you have room for others, and time enough to spend in training them, you will want standard plants; under which head should be classed only those that with proper treatment maintain an erect position without support. It is sometimes necessary to provide rods or trellises for young plants of upright proclivities, during their first season, but after that they should be laid aside. To this end care should be taken to give all portions of a plant its proper share of the sun's strengthening rays, either by turning it around or moving it to a sunnier window, as well as furnishing it with the soil it needs for attaining the requisite firmness and symmetry of form by which it becomes self-supporting; and all that under such treatment will not acquire a perpendicular habit of stalk or stem should be treated as trailers, and left to their wandering propensities in the wide accommodation which hanging pots or baskets afford.

Among standard plants the *geranium*, which gets its name from the Greek—meaning *crane's bill*, in allusion to the form of its seed vessels—should be first mentioned; because this genus furnishes a large variety of foliage and bloom (if under the same name we count the pelargoniums, or stork's bills, as is commonly done), and all species are easily cultivated. The stork-bill family bear larger and more showy flowers than the geraniums proper, and many of them are fragrant in both leaf and flower—the crane's bills are not.

A few geraniums are found in our dusky woods, and along shady and damp country roads, which are much improved by a training similar to that bestowed upon their city cousins—who were originally natives of Europe. Pelargoniums came first from the Cape of Good Hope, and even in their natural state are of neat, compact growth, and brilliant and profuse bloomers. Hybrids, uniting the best qualities of both families, are now the most popular style of geranium.

Plenty of air and sunshine are essential to the thrifty growth of geraniums—they cannot bear crowding. If their branches do not spread widely, so that the whole plant is freely exposed to light and air, some sprigs or branchlets must be cut away, and those that remain assisted for the first year or two with rods, to which they are tied, for attaining a spreading form. They need also frequent showering and much watching and cleansing to keep them clear of insects.

Old geraniums should be re-potted in May, at which time their branches should be cut back a few joints. Take the pieces thus obtained and set them to the depth of the first joint in good garden loam mixed with decayed vegetable matter, either in pots under a bell-glass for a fortnight, or in a cool and shady garden-bed;—which is also the best place out of doors for the pots containing old geraniums. All the summer water sparingly the potted geraniums, and—*forget* those in the open ground. In September a new plant should be taken from its garden soil, with a ball of earth about its roots,—but these must be trimmed a little,—and having selected a pot which will allow it two inches of loose soil in every direction, throw in a few pieces of charcoal of the size of small pebbles, and then a handful of loam and vegetable mould well mixed. Set upon this the ball of roots, and support the stem of the plant with the left hand while you sprinkle in more soil, and then strike the edge of the pot to settle it. Add more soil, shaking the pot gently, or striking it, and then press this soil with a smooth round stick around and upon the roots till the plant stands firmly. Add more soil still, and press carefully yet lightly with the fingers all about the crown or neck of the plant. Water it, and if by this means the soil sinks below the crown lay on a little more. Set the pot in a cool and shady place for a week or ten days,

and then take it to the parlor. If the leaves droop, water it freely; but as they regain their natural position abate this. After it is taken to the parlor water it daily with tepid water; and give it liquid manure once a week after the flower-buds appear. Pot old plants in the spring according to the same manner.

The horse-shoe, or *zonale* geraniums, either those with a dark band, which gives their name, or those with variegated foliage—each leaf of which is as gay as a flower; in crimson and gold, and green,—or the silver or gold-margined, are among the easiest of plants to rear, and may be kept in almost constant growth and bloom. One may have a fine display of floral beauty with this sort alone; the different varieties giving large trusses of white, scarlet, red, crimson, rose, and salmon, either singly, or shaded or striped with each other—those bearing double flowers are particularly elegant. The ivy geraniums, usually classed with these, with their dark green wax-like leaves heavily ringed with black, and their blossoms of white, red, or light purple, are trailers, and very desirable for hanging baskets.

The leaves of the fragrant geraniums—rose, balm, lemon, nutmeg, citron, etc., are always needed for bouquets (their flowers are of small account) and enhance the beauty of their more showy relations, the pelargoniums, whose gorgeous petals of crimson and brown, white and maroon, rose and crimson—mottled, or flecked, or shaded, may fill your windows with splendor from November till May if their shoots are cut back in July or August and all buds pinched out till October. These need to be re-potted in June and kept in the shade, rather dry, till September,—generally within doors.

Next to geraniums, and forming not a foil to their beauty and yet enhancing it greatly by the contrast of their delicate blossoms and graceful foliage, come the eupatoriums, stevias and heliotropes. The eupatorium gets its name from Eupater, king of Pontus, who first used the plant in medicine. We have many species growing in their native beauty in the lonely mountain passes and valleys of the north, as well as in the sunny meadows farther south; and the florist has transplanted them and carefully watched and tended their growth till the foliage has attained unwonted smoothness and beauty, and the hues of the tassel-shaped flowers have become clearer and brighter. Their large clusters of snow-white, or lilac blossoms, have a fine effect among geraniums. Cut back old plants to their roots, in the spring; shake out the old soil and re-pot in good loam and sand mixed in equal proportions. Make new plants of the cuttings. Start them in damp sand under glass. Water them much and frequently. Set them in the garden till September, then accustom them gradually to the in-door atmosphere. They will bloom from November till February. The stevias, of similar foliage, but a yet more delicate and feathery flower, of a creamy white, cultivate in the same way. The heliotrope, with its delicate lavender and purple flowers, so exquisitely scented, is always desired with geraniums. Cultivate this like the two preceding plants, but beware of the autumn frosts if they are kept out of doors; and when first taken from the garden handle tenderly, or the foliage will appear as if scorched, and quickly wither away. Pinch out all buds that appear on these plants during the summer. No plants can be so effectively grouped as geraniums with heliotropes, eupatoriums, and stevias, if proper attention is paid to an agreeable contrast of their blossoms,—the purple or lilac being always flanked with white—never with red or crimson or rose,—and the white mingled among scarlets, crimsons, reds, and salmons—the white predominating.

[TO BE CONTINUED.]

Pears at Rochester.

THE winter meeting of the Horticultural Society of Western New York, besides other matters of unusual interest, had an exhibition from Ellwanger & Barry of twenty-six dishes, with as many varieties, of *winter pears*—most of them in excellent eating condition. The Anjou took the lead, both in fine appearance and in delicious quality. I understand the proprietors have still several barrels of this admirable pear in excellent condition. Next after this, the Josephine de Malines and the Duchess of Bordeau attracted much attention. The former of these two is well known, and continues to maintain its high position. Dwarf trees of the White Doyenné or Virgulien, the fruit of which years ago failed, were re-grafted with this sort, by inserting a number of scions in the head of each tree, and

leaving the pyramidal shape. These trees are now ten feet high, with strong vigorous shoots and branches and with a fine form—and they bear abundantly. The Duchess of Bordeau is of only medium size, but the flavor is rich and fine. The same collection had specimens of Jones or Jones' Seedling, an excellent cinnamon russet pear, of rather small size. I have fruited the Jones as a dwarf for several years, and it uniformly bears large crops, and every specimen, large and small, is of fine flavor, and fine and melting in texture. It immediately follows the Winter Nelis, and is scarcely inferior in flavor. What is the experience of others—and why is it not more extensively cultivated? T.

Winter Pears.

BY P. BARRY.

The Beurre d'Anjou.

EVERY year's experience with this variety gives additional proof of its great value. The tree, as it acquires age, becomes more and more productive, and the fruit improves in quality as well as in keeping properties.

Instead of being a late autumn fruit, as classed in the books and catalogues, it is really, at the North, a winter fruit. Last winter Col. Wilder carried some with him to Florida, and they were eaten there about the 1st of February in good condition.

At the present time, February 4th, we have them here as fresh and sound as when gathered from the tree. They have been kept in a barrel in a cool barn cellar, and when ripened a few days in a warm room, are melting and delicious. Indeed, they are very good when eaten directly from the barrel, but a little ripening in a warm place improves them, as it does most varieties that have been kept in a cool place.

When we take into account the excellent character of the tree, both on pear and quince stock; the size, beauty, richness, and keeping qualities of the fruit, we can have no hesitation in awarding it the first place among late autumn and early winter varieties. Truly "a noble fruit."

The Josephine de Maline.

This is another variety that improves from year to year as the trees acquire age and we know more of it.

While the tree is young it is rather deficient in vigor, and the habit of growth somewhat irregular. The foliage is small, and this also detracts from the appearance of the tree. It is hardy however, vigorous and very productive; the fruit is always smooth and fair, of a delicate straw color; the flesh slightly tinted with rose, melting and perfumed, may be kept till the 2d of April. The Easter Beurré being so difficult to grow, generally, I think the Josephine is the finest late winter pear we have. We have had splendid crops of it here last season and the previous one, on trees of White Doyenné, grafted over. I have also had fine crops on a tree of Woodales St. Germain, grafted over.

The Wauregan Raspberry,

IS a new seedling, discovered some fifteen years since, at Norwich, Conn., but only lately brought to the notice of the public by its originator, Dr. L. L. Button, of that city. Is described by Mr. John V. Wilson, a former President of the Norwich Horticultural Society, as of very remarkable size, quite prolific, and *continuing long in bearing*. Its only defect is the same as that of all our largest and finest red raspberries, *not perfectly hardy;* must be classed with the *Franconia, Brinckles' Orange, Knevet's Giant*, etc., but will bear the same exposure these varieties do, and needs the same protection.

The illustration is a very faithful representation of the size of the berries, and its habits of fruitfulness, being copied from a photograph of a cluster.

Its best recommendation is its *firmness*, which equals the Franconia, and renders it of great value for market purposes. Flavor of the highest character, sprightly and aromatic. It resembles the Brinckles' Orange in form of growth, but is not strong enough to dispense with stakes or trellis.

It appears to be, from all the evidence we can obtain from trustworthy sources, a seedling of extraordinary merit.

The Wauregan Raspberry.

A Pleasant Cottage Home.

INQUIRY is made of us very frequently for designs of pretty cottages *very cheap*, say less than a cost of $1,500 to $2,000. It is very difficult to produce acceptable designs for such low-priced houses, because either building materials and labor are too costly to warrant the possibility of cheap homes, or if one can be built for so low a sum, it is almost always devoid of some ornaments, which seem absolutely necessary to make the cottage an object of beauty, as well as of convenience.

The design we present this month has the merit of both convenience and a reasonable degree of ornament, and yet will not exceed $2,500. In the interior of our State or country districts, a good carpenter will build it for less than $2,000.

In this design the veranda, balcony, eaves, brackets, dormer windows and gables, are very simple and easily constructed, while the ornamented appearance of the cottage comes from the climbing vines and pleasant surroundings introduced by the artist.

Were we building for our own taste, we would introduce a little more ornamental work, and make the architectural beauty complete. The following is the plan and arrangement of the rooms:

The front door opens into a vestibule A six feet wide and nine feet long. From the rear of this a passage extends to the staircase hall E, which opens out to the yard, or into a wood-shed if desired. B, the parlor, is fifteen feet square, and connects by means of a small passage with the living room D. This living room is twelve feet by seventeen, and opens into the staircase hall at a point convenient to the back entrance to the house. Across the hall, and near the head of the cellar stairs, is a good sized closet or store room *a*, fitted up with shelves and cupboards, and lighted by a single window.

The sitting room C measures thirteen by fifteen, and has two doors, one opening into the vestibule, and the other into the passage back of it.

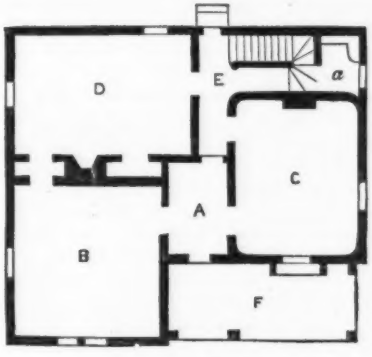
The second floor is divided mainly like the first, and comprises three chambers, a bathing room, and five closets, besides the hall.

The Orchard.

I READ an admirable article in a number of THE HORTICULTURIST, for 1869, on the "*Orchard*," much of which I heartily endorse; but there was one practice recommended that I must here assail, with all due deference to the opinions of the author of that article. I refer to the question of cultivating (plowing) the orchard. Until the trees are ten years old this is the proper treatment, but after that age I would *never* suffer the ground to be molested with plow, hoe or spade; but would treat it very much as recommended in the article—save only the stirring of the soil—that is, I would at the tenth year sow it to red clover, and never cut it off, but let it die down and *rot*, or I would turn in hogs or sheep to eat off the first crop, allowing the second blooming the same season to grow up to seed and fall down for the next year's crop of seed. In this way the ground would be mulched summer and winter. I would keep it in clover as long as it would grow well, and after that sow any other grass seed that would not make too tall a growth, and alternate with clover every few years. The plan of stirring the soil injures the roots, and of course injures the trees, and the result is that the fruit either falls prematurely, or specks and rots. During the first decade after planting I would never stir the soil *under the branches*, except an inch or two deep, and under the branches I would cut and scatter some clover three or four inches deep in June, and in December would place straw of some kind the same depth, but not within two feet of the trunk, as that would harbor field mice, to the injury of the bark. Such has been my practice and observation with uniform success, while, on the plan of stirring the soil, great and irreparable injury has followed. How far this plan of mine would be successful and best in other soils and climates differing from Kentucky, I am not advised, either by observation or information, except that contained in the excellent article referred to; but I am inclined to the opinion that the same general rules and natural laws would apply, and I should be loth to adopt any other practice anywhere than the one briefly set forth herein.

HENRY T. HARRIS.

A Pleasant Cottage Home.



Ground Plan.

The Cut-Leaved Weeping Birch.

Betula laciniata pendula.

THIS tree was figured in the February number of THE HORTICULTURIST, under the name of "American White Birch," evidently by a mistake of some one. I can give you something of the history of its introduction to this country, which may be interesting.

In THE HORTICULTURIST of September, 1848, being the third volume, H. W. Sargent, Esq., then in Europe, wrote an account of his visit to Booth's nurseries, in Holstein, in which he said: "Among trees and shrubs, rare to me, I noticed a weeping birch peculiar to Germany. It had descending shoots thirty-two feet long; the branches hang as perpendicularly downward as those of either the Sophora pendula or the common Weeping Willow, and are quite as delicate and pensile as the latter."

After reading this we took immediate steps to procure it, and succeeded in importing a few plants the following spring. From that time until the present it has been extensively propagated in our nurseries. In our Catalogue of 1850, it is offered at $2 a-piece.

One of the first imported trees now stands in our specimen grounds, and is nearly fifty feet in height, the trunk near the ground is three feet in circumference. Another, one of our own propagation, is thirty-eight feet in height and about same thickness of trunk as the other at the ground.

This is the one from which the portrait was taken that appears in your columns, but the portrait fails to show the long, slender, thread-like, pendulous branches which make it such a striking and beautiful object.

We have still another younger than either of those mentioned and nearly as large. It grows, like the common Birch, rapidly, and makes a large tree in a few years.

I think that among all the deciduous trees of drooping habit, now grown, none possess *gracefulness* in so great a degree as this. P. B.

MOUNT HOPE NURSERIES, ROCHESTER, *February*, 1870.

The Buffum Pear.

WE are indebted to Rhode Island for the nativity of the Buffum pear, and by Mr. Downing it is considered probably a seedling from the Doyenné. Its quality is very variable, frequently very coarse and ill-flavored, and again rich, aromatic, juicy, and melting. It can be classed as a *good orchard fruit*, but not of highest excellence. The fruit is only of medium size, a fair yellow color, changing to a bright red, slightly russeted. It is very attractive as a market variety, and is often sold by stand dealers, in cities, for the Seckel. Although every true orchardist can always recognize the difference in taste and shape.

But its crowning excellence and glory is in the tree itself.

Was ever a pear tree seen better able to realize our idea of beauty than this? Growing erect and vigorous, with its straight regular branches, and large deep green leaves, year after year, assuming in upward lines the grace and beauty of a perfect pyramid, until in full vigor it is unequaled among all the trees of the orchard.

For *hardiness* we ask it a trial; for use in ornamental grounds we bespeak favorable mention, for it is equally pleasing on the lawn with any of the flowering shrubs or low growing trees. In the garden, what a pleasure it is to train it in regular symmetrical outlines for hedges or screens, or let it, like a sentinel, guard the entrance to our choicest paths, or stand beside our grape laden arbors. A correspondent of the *Michigan Farmer*, adds a word concerning it, so appropriate in ideas and expression, that we quote the passrge entire:

"Those who have not seen this tree in growth have no idea of its unique beauty. In form it considerably approaches the Lombardy Poplar—upright, compact and with a large number of nearly parallel upright limbs. It needs a little opening to keep it from being too intensely compact, but no heading in like most other pears. It is peculiarly adapted to lining avenues and garden walks. It is so close and upright as to allow of very close planting, and forms a line or curve almost equal to a well trimmed hedge. Where neatness and uniformity of outline is needed or allowable, the Buffum surpasses any other fruit tree

The Buffum Pear.

I know. On a lawn, also, where ordinary fruit trees would be excluded in favor of purely ornamental deciduous trees, the Buffum would not only not mar the scene, but would contribute to the charm.

"The foliage is also a rich, glossy, dark green, and not likely to fall early in the season. The fruit is of a medium size, a little coarse-grained, but nearly equal to the White Doyenné, and one of the longest keepers of all the early autumn pears. It is also an early and profuse bearer, and in every way meets the requirements of ordinary pear growers."

Landscape Gardening.

"It is the first step which costs."

THE disappointments which so often mock the hopes of a happy country life, and which come in the form of the annoyances and vexations entailed by lazy workmen, large bills and delinquent nurserymen, have led many persons to ask, is it impossible for us to have a cheap and yet beautiful place in the country, either by doing the work ourselves or by employing a professional person to do it for us? It is not impossible, if before we begin our work, or to build our house, we carefully consider the difficulties which we must meet, and are determined to be contented with what is possible, and are willing to confess that we are ignorant of many things which it is the duty of only professional men to know. The largest number of country place vexations come from miscalculations of what can be done with limited means. We want more than we are willing to, or can pay for, and try to supplement our purse with our own efforts and, perhaps, the gratuitous advice of our neighbors and friends.

The first and long enduring mistake made by those who go to the country to live in summer, or for the year, is an unwise selection of the land on which they mean to make their future home. Chance oftener settles the question of locality than selection, though sometimes men are influenced by hereditary and family associations. Where any local attraction, such as follows one's family or business, decide a man to purchase any particular piece of land, there is no need of deliberate thought about the advantages and economies of situation and treatment, because he must make the best of the land he has acquired; but when the purchaser is indifferent, and can as well build in one district or village as another, or in one or another part of the same town, then it is of the utmost importance that the selection should be carefully made.

It often happens that a wise choice of lot will save many hundreds and perhaps thousands of dollars in making a country place, as, for instance, whether the land will permit the house and other buildings to be built and approached by such easy grades as will require no extra filling of gravel to bring the new surface into harmony with the old.

A few feet of filling seems but little as we contemplate our building lot, and run over in our minds the inevitable expenses. But every two hundred and sixteen cubic feet of loam or gravel to be moved will cost from two dollars to six, in proportion as it is easy and convenient of access. It is extremely costly to move earth; we can spend a thousand dollars in that way without making much change of surface or show in the effect produced.

An unwise choice may make it necessary to spend a large sum in getting water, or in removing rocks to make a lawn, or in length of avenue, shelter required for protection to gardens, young plantations, etc.

All these first questions, which readily suggest themselves to the mind of a professional man as structural and unavoidable necessities, only come to the novice as he slowly moves from one point to the next. Therefore the selection of site, which involves them all, should be gravely pondered, and, if possible, we should get the advice of some experienced person.

Everyone thinks himself fully competent to chose a building lot, and most persons would scorn the idea of asking any man to help them. Yet, when we look at the question analytically, and summon the long train of future work and improvements, which will cost from two to twenty thousand dollars, it is plain that we ought to start right, if possible, and that what we pay for advice, which will help us to avoid blunders, is but a small percentage on the whole future expense.

Most persons who have made country places, have said many times, as the work progressed, "If I had only known this at first; if I had foreseen what I wanted, I would have changed my plan and have saved cost and trouble, but it is too late to retrieve the mistake."

It is very easy, when we look back at the completed work, to see where great savings could have been made, if we had only known how to do, or to avoid some of the things we have undertaken, and it is just this knowledge that comes with the experience, which it is the peculiar office of professional men to supply; and no amount of reading or theory will enable a novice to obtain it.

Few persons understand, before they begin their work, that the simplest treatment of the ground to be improved will cost a definite sum of money, and that the amount will vary with the economy and wisdom with which the work is managed.

It is easier to believe that any paid advisor will be likely to recommend costly work, which will tend to show his skill and give him a reputation, than to try to simplify our undertakings and reduce their cost. Such conduct is human, and we may be liable to be over persuaded into extravagance by men who are familiar with the resources of nature and the effects which can be created by using money liberally; they too often set light value on other men's money; but it is certainly less dangerous to be guided in our plans by one who can answer any questions we may ask. We may test our theories before we put our money into them, if we consult with one who is supplied with a fund of experience in all matters that relate to the changes of surface and the use of earth, grass and trees. It is safer to seek such aid than to venture out alone on a sea of whose rocks and sand-bars we are ignorant; whose shores we have never explored; whose depths we never have sounded; our only guide being a compass that we have never learned to use.

ROBERT MORRIS COPELAND.

Blackberry Culture.

BY P. C. REYNOLDS.

OF the entire list of small fruits cultivated in the Northern States, none are more uncertain than the blackberry. This is singular, considering how hardy, vigorous, full of vitality it is in its wild state.

Previous to the discovery of the Lawton, the chief dependence of our cities for their supply was upon the wild blackberry. Quite a good many are still received from that source, but the cultivated sorts are fast taking their place. The greatest objection to the wild sorts, is the preponderance of seeds over pulp. That objection is obviated to a great extent in the cultivated sorts.

In the Lawton was presented a variety so large, handsome and productive that attempts were at once made to cultivate. The result has been anything but satisfactory.

The great cause of failure in the cultivated blackberry is its tenderness, inability to endure our northern winters. The question here arises, why should the blackberry be so tender? Black raspberries endure a degree of cold that would freeze the blackberry down to the ground. The former ripen their fruit and canes earlier than the latter. Is there any correspondence between the early maturing of the fruit and wood? I think that there is. Among red raspberries, the Kirtland is the first to ripen, and its season is short. It is also the most hardy. The Hudson River and Franconia hold on into the blackberry season and they often suffer in winter.

But this is speculation. What the grower of small fruit wants to know is how to prevent the blackberry from freezing down in winter.

The only way that we can accomplish anything in that direction is to encourage the maturing of the canes. In the first place we should select a warm, dry, well-drained soil for our plantation. A soil on which corn would always ripen before frost, would pretty certainly ripen blackberry canes before the frost would stop their growth. I know of a plantation of Lawton's on such a soil that seldom fails to bear a large crop of berries.

Another precaution—never manure blackberries in the *spring*. It will induce a late growth of cane, which will be unlikely to mature.

If a plantation requires manure apply it immediately after the suspension of growth, in the autumn. It will then dissolve and soak in down to the roots, ready to give them a vigorous start in the spring. With these precautions in selecting a location, and manuring blackberries, the next question is, what *varieties* to cultivate. I think, from the light we have upon the subject, that I should give the Early Wilson the preference. I am planting it on my grounds more extensively than any other kind.

Its merits are earliness and shortness of season, ripening its entire crop within two or three weeks. It is also large, good and productive.

The public taste is very fickle and demands frequent changes in fruits. After enjoying strawberries for a few days it calls for raspberries, and by the time raspberries become really plenty it clamors for blackberries, upon which it is soon satiated, and then wants pears, peaches, grapes, &c.

To meet this fickle, ever-changing demand, it is highly important that such varieties be cultivated as ripen early, and ripen their entire crop in a few days. This desideratum is met by the Early Wilson. It endures the winter better than Lawton, but perhaps not quite as well as Kittatinny, which I think ranks second in the list of well-tested varieties for profit. It is generally considered the hardiest of all varieties, enduring the winter in localities where the Lawton fails. It is good, productive, but smaller, softer and later than the Early Wilson.

The Lawton has been longest before the public, and is, under favorable conditions, a large, handsome, good, productive blackberry.

But those favorable conditions are seldom realized. It winter-kills about Rochester on an average half the season, and is never allowed to hang on the canes until *ripe*—as a consequence, it is very acid, and sells low.

CULTIVATION.—Land in condition to bear an average crop of corn is in suitable condition for blackberries. The rows should be marked out straight both ways—four feet by eight feet—which will admit of cultivating with a horse, both ways the first two seasons, and one way thereafter.

In transplanting, reject weak plants, handle careful so as not to break off tender shoots, and plant with the hands. Blackberries should always be cultivated *shallow*, otherwise you mutilate the roots, causing sprouts, which are troublesome. One prominent idea should be kept steadily in view in all the processes of the cultivation and pruning of blackberries, the promotion of the early ripening of the cane. Late in May, or early in June, when they have attained a height of twenty inches, or two feet, the terminal bud should be pinched off. This will cause them to throw out laterals, which should be allowed to grow undisturbed the remainder of the season. The next spring these laterals should be shortened in about one-third, which will give the bush a strong compact head, self-supporting.

The second year it may be well enough to allow the canes to grow to a height of two to two and a half feet before pinching, but I am decidedly opposed to a high bush, exposed to the winds. To keep a plantation clean, with shallow culture, it is imperative to meet the weeds on their first appearance, for if allowed to become deeply rooted it will require deep culture to uproot them.

ROCHESTER, N. Y.

Pears in Southern Illinois.

Notes on Varieties.

THE Southern portion of Illinois differs materially, in its topographical and geological features, from the Central and Northern parts. The level, treeless plains, which characterize the latter, and which have entitled Illinois to the designation of the "Prairie State," give place, in the South, to wood-covered hills, with a soil of clay quite distinct from the black loam of the plains. Forty miles north of the confluence of the Ohio river with the Mississippi, is a high range of rocky hills, extending, east and west, from one river to the other, and known as "The Grand Chain," whose highest elevations are six hundred feet above the level of the rivers at Cairo. This ridge, with its foot hills, is about thirty miles wide, and it is here that most of the great orchards of "Egypt" from which Chicago receives her chief supply of early fruits are situated. South of this and separated

from it by the wide valley of a small river, and only twelve miles from Cairo, is another ridge, or series of ridges, some 150 feet above low water mark in the rivers, of a still different geological formation. It is what the geologists call *loess*, and is composed of a finely comminuted and friable clay, resting upon a thick bed of gravel and sand. It is rich and well drained, both underneath and on the surface, and is wonderfully productive of wood growth as indicated by the great size and remarkable variety of the forest trees it supports. The soil has been pronounced by competent authority to be unsurpassed for the growth of fruit trees, and is just such as would be chosen for the pear.

This brief account of the character of the region and soil in which my orchard is situated seems necessary to give value to a statement of my experience with varieties.

The trees, which are partly standards and partly dwarfs, were planted in the spring of 1859 and the spring of 1862. They have generally grown well and most of them have borne more or less fruit. Some varieties have suffered from the fire blight while others have been wholly exempt.

Of the very early sorts, the *Bloodgood* has proved most satisfactory. The trees are thrifty, vigorous and handsome, their only fault being their tardiness in coming into bearing. The fruit is of fair size and, for so early a pear, of excellent quality. Ripe about first of July. *Madeleine* is objectionable from its tendency to blight, resulting from its sappy, succulent and late growth. The fruit ripens a little earlier than Bloodgood and would be valuable if the health of the tree could be depended on. *Julienne* is a pear of handsome appearance, but the quality is variable, proving, in some seasons, insipid and worthless. The tree is healthy and fruitful.

Beurré Giffard.—In size, quality and beauty, is superior to either of the foregoing, though not quite so early. The tree, however, is a poor grower and shy bearer. I have not found it profitable.

Rostiezer.—Trees ten years old, on quince roots, have borne no fruit. Its habit of growth is spindling and ugly. It seems to have disappointed all who have planted it in this part of the country.

Bartlett.—Maintains its preëminence as a market pear, and no variety is likely to rival it, in its season, unless it be the Howell, which possesses almost all its good qualities, with better flavor. Contrary to what is said of it in most other localities, the Bartlett is one of the freest from blight.

Flemish Beauty.—Never had much to recommend it except the large size and beautiful coloring of the fruit. The trees, however well they may grow for a few years, sooner or later, are almost sure to manifest their constitutional feebleness in a premature dropping of the foliage. The same may be said of that much superior pear, the *Beurré Diel*. I have had very fine fruit from both of them, but would plant neither of them for profit.

White Doyenné.—Is, with me, healthy in tree and fruit. It is exceedingly productive, and I hope it may be long before the malady that has made this delicious fruit valueless in so many localities, shall appear in every orchard.

Gray Doyenné.—Resembles and is quite equal in quality to the White. The fruit is rather larger and is very attractive in its orange-colored russet coat.

Buffum.—Very productive, and the fruit very delicious, when well ripened, but it is too small for market.

Seckel.—Trees healthy and handsome, forming a perfect pyramid almost without pruning. The fruit is the standard of flavor, a standard to which no other sort has ever yet attained. Its small size is the only objection to it, and that is scarcely an objection here, when many of them measure full two and a half inches in the transverse diameter.

Belle Lucrative.—Trees moderately healthy and exceedingly productive. The fruit is of first quality but objectionable as a market variety on account of its want of color. People buy pears by the eye rather than the taste, and the plain green coat of the Belle does not attract them.

Duchesse d'Angoulême.—This is the only pear I would care to cultivate on the quince stock. It is as hardy and healthy as an oak, and very productive. The fruit is of medium quality, but its large size sells it.

Louise Bonne de Jersey.—Is productive and profitable. The fruit, when well ripened, is nearly first rate.

Glout Morceau.—Makes an exceedingly handsome tree, but it is tardy in bearing and very prone to blight. The fruit is large to very large, sometimes very fine and sometimes astringent and scarcely eatable.

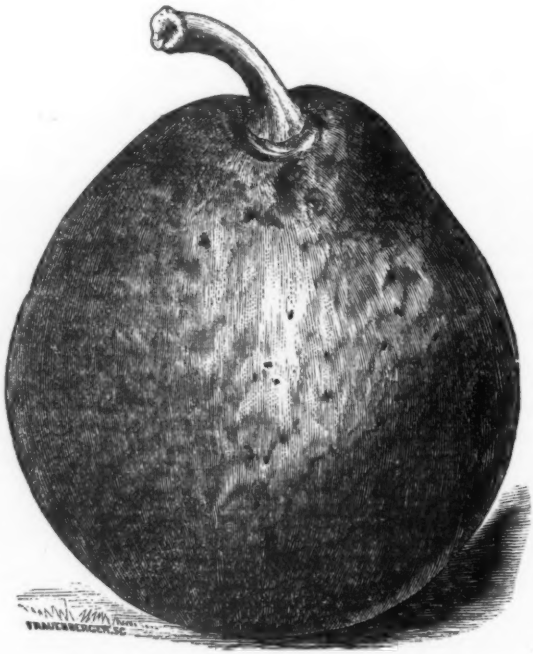
Beurré d'Anjou.—My trees, on quince roots, have proved but moderate growers and very shy bearers, but the fruit is almost perfect in every constituent of a first-rate pear.

Stevens' Genessee.—Shy bearers; fruit large, handsome and excellent.

There are several other varieties that I have fruited myself, or seen in the orchards of my neighbors, but would not speak of them without further trial. Among those that promise well are *Passe Colmar*, *Onondaga*, *Beurré Easter* and *Lawrence*.

My experience leads me to the conclusion that a profitable pear orchard must contain only a very few well chosen sorts. I could not name more than six that I should be willing to plant largely. My belief is, indeed, that one of the main causes of the failure in pear culture has been the rage for large collections of varieties. These are for the amateur, the commercial orchardist does not want them.

VILLA RIDGE, ILL. A. M. BROWN.



Duchesse De Bordeaux Pear.

THE above is an illustration of the new pear, introduced by Dr. J. S. Houghton, of Philadelphia, and favorably mentioned at the meeting of the American Pomological Society, last September, and also on other occasions.

Since pomologists are now endeavoring to induce growers to pay more attention to our Winter *Pears*, this variety will deserve special interest. By those who have tasted it it is pronounced of first rate quality, large size, in form like the Beurré Diel and Doyenné Boussock, keeps sound and good until February, March and April; ripens up and colors finely, overflowing with rich sweet juice, delicious and refreshing. It would be well for our large pear cultivators and amateurs to test it carefully.

Belle de Choisy Cherry.

NOT being a market variety the Belle de Choisy is desirable only for amateur purposes and family culture. In flavor unexcelled, it is universally admitted to be of first character, and one of the most delicious varieties we cultivate. It originated in the year 1760, in the village of Choisy, near Paris, France, and belongs to the *Duke* family of *cherries*, and like others of same class, is a healthy, hardy, vigorous grower, being well adapted to a great variety of soils in both northern and southern locations.

Fruit is only of medium size, round in form, thin skin, with pale amber color, changing to yellow, finely netted with red when ripe; flesh is very tender, juicy, of sub-acid sweetness, and delicious quality; ripens last of June, is only a moderate bearer, but very desirable for table use. The Governor Wood being nearly equal in quality, but more vigorous and productive, will supersede it for large plantations; but the *Belle de Choisy* should be remembered in every experimental garden.

Garden Ivies.

On the Classification and Nomenclature of the Species and Varieties of Hedera.

(Communicated to the Linnæan Society by SHIRLEY HIBBERD.)

DURING the past fifteen years I have assiduously collected and cultivated the species and varieties of Hedera, and my collection comprises upwards of one hundred varieties (so-called), representing the three well-known types; namely, H. helix, of Linnæus; H. Canariensis, of Wildenow; and H. colchica, of Koch. Observing that many varieties were known in gardens under a diversity of names, and that those names were in many cases unnecessary complex, and in some cases obnoxious both to sense and syntax, I determined on a complete revision of my own garden catalogue of ivies, and I now respectfully submit to the Linnæan Society a general summary of results:

First, as to the general principles of the classification now adopted. It is based on the three species named above, the characters of which are unmistakable. The sub-divisions comprise groups of—1, Scandent or climbing ivies with green leaves; 2, Scandent or climbing ivies with variegated leaves; 3, Arborescent or fruiting ivies with green leaves; 4, Arborescent or fruiting varieties with variegated leaves. Under one or more of these four sub-divisions may be placed every garden ivy known—a few which combine the property of climbing and the more free growth of the scandent forms, with the property of fruiting also, may claim a place in more than one group. I have, however, in every such case, considered a variety known to bear fruit as arborescent, though as to habit of growth it may very closely approximate to the truly scandent forms. A very brief experience with ivies will convince the observer that every scandent form tends inevitably to the fruiting form, requiring only age and immunity from the pruning-knife to produce in due time abundance of berries. It is not, however, so generally well known that every fruiting form, however arborescent, is capable of reverting back to its corresponding scandent form—the mere opportunity for climbing, as, for example proximity to an old brick wall and its roots having free range in a rich soil, tending to what may be properly termed its rejuvenescence. More than one variety in this collection appears to be in a permanently intermediate condition between the extreme characters of the climbing and fruiting forms, producing shoots that are in some cases decidedly scandent, with large and distinctly lobed leaves, and other shoots of a more twiggy nature, with small entire leaves; these twiggy shoots *tending* always to produce fruit, but never so much as perfecting a flower-bud.

Secondly, as to the nomenclature. In adopting or inventing names for the most distinctive kinds in the collection, an endeavor has been made to harmonize the requirements of the cultivator with the usages of the botanist. For garden purposes, one descriptive name, which can be easily remembered, or, at all events, easily associated with the plant it represents, is the great desideratum. Commemorative names are simply useless as aids to identification, and geographical names are nearly useless when good; and as they are generally bad, they are also generally objectionable. Hedera Canariensis may be cited as an example. It is the Canary Islands ivy of the botanist, the "Irish ivy" of the horticulturist, the African ivy of the traveler. The necessity of a revision of the nomenclature of the ivies may be established by a glance at any garden list of them. Thus, for example, we find, even in the best catalogues, such names as *Hedera helix arborescens baccifera lutea.* Now, to say nothing about scientific properties, such names spread over a collection of a hundred or so varieties constitute a painful burlesque of botanical nomenclature. The plan I have adopted makes an end of all such difficulties; it provides for every distinctive kind a descriptive name, which can be taken up into its proper connections by the botanist—if the botanist will adopt it—while for the use of the gardener it is valuable both as a key to the character of the plant, as well as a suggestion of its existence. To carry out this plan in its entirety, I have been compelled to assign to two out of the three species new specific designations, which I trust the botanist will allow, if only in aid of an experiment which has for its principal objects simplicity and utility in the nomenclature of plants. Thus, "Canary" or "Irish" ivy is in this classification designated *Hedera grandifolia;* and the Colchican ivy, more generally known as H. Rœgneriana, is named *H. coriacea.*

Thirdly, as to the varieties. These, if estimated by their names, number considerably over two hundred. After a first general revision, and the obliteration of a number of most

ridiculous synonyms, there remained about one hundred kinds. These were carefully classified and compared, the most distinctive being renamed, unless it happened that the names they already bore were deemed suitable. There remained no less than fifty varieties, sufficiently separated by their characters to justify the places assigned them in the classification. All others have been canceled, and the collection comprises the selected fifty kinds only.

HEDERA HELIX (Linnæus), the European ivy. The pedicels and calyx are covered with white stellate hairs, with six to eight rays each.

A. Scandent green-leaved forms of H. HELIX.—*Helix major*, the largest leaved British ivy; *Helix minor*, the smallest leaved British ivy. These are the two commonest climbing ivies in all the northern parts of Europe. *Heterophylla*, a beautiful variety, intermediate between the scandent and the fruiting form, but has never yet flowered. It was raised from seed at Stoke Newington. *Gracilis*, a very slender form of H. helix. *Tortuosa*, a variety characterized by its twisted leaves. *Lobata major*, a robust variety, with leaves distinctly lobed. *Rugosa*, a robust variety with corrugated leaves. *Lucida*, commonly known as Hedera helix poetica, or the Poet's ivy; it is remarkably glossy, and the noblest variety in this section. *Nigra*, the leaves are nearly black. *Contracta*, variously known as "Sagittæfolia," "Taurica," etc., etc. *Scutifolia*, a small variety with shield-shaped leaves. *Cinerea*, known in gardens as "Himalaica;" it has the most decidedly grey-tinted leaves of any in this section. *Triloba*, a small variety, almost uniformly three-lobed. *Palmata*, this is the "Hedera helix palmata" of gardens. *Crenata*, the "crenata" of gardens. *Digitata*, the "digitata" of gardens. *Angularis*, a peculiarly angular-leaved form, which is occasionally met with labeled "Taurica." *Pedata*, an exceedingly distinct form, known in gardens as "chrysocarpa;" but as it is unquestionably a scandent form, the leaves of which will become less deeply lobed or absolutely entire when it attains a fruiting state, such a name is inadmissible—it belongs, in fact, to the fruiting form, and not to this peculiarly pedate kind. *Minima* has the smallest leaves of all; in general configuration they resemble those of pedata, but the two plants are quite distinct, more especially in winter, when pedata has a deep green hue, and minima is of a brownish purple.

B. Scandent variegated-leaved forms of H. HELIX.—*Discolor*, the "Hedera helix minor marmorata" of gardens. *Sulphurea*, a sulphur-tinted variety, known as "marginata canescens." *Chrysophylla*, a fine golden-hued ivy, which, being popular, has a multitude of garden names, the most common being "aurea densa minor," and "canariensis aurea marmorata." *Chrysophylla palmata*, a palmate leaf with yellow variegation. *Marginata grandis*, *Marginata major*, *Marginata media*, *Marginata minor*, *Marginata rubra*, a group of five distinct and beautiful varieties, the leaves of which are margined with creamy variegation. The last in the group acquires a deep red tint in winter. The names by which these five are severally described in garden catalogues are sufficient in number to serve for fifty varieties, and sufficiently ridiculous to be unfit for any. "Hedera helix minor marginata Cullisii," the garden name of the variety now designated "marginata rubra," affords an example of the necessity of a thorough revision of the names. *Sub-marginata*, the last in this section, is characterized by a line-like whitish margin. The five constituting the marginata group proper, have broad band-like margins.

C. Arborescent green-leaved varieties of H. HELIX.—*Baccifera nigra*, the common fruiting form of H. helix. *Baccifera nigra crenata*, a wrinkled-leaved variety of the last. *Baccifera lutea*, the yellow-berried ivy. *Baccifera alba*, the white-fruited ivy.

D. Arborescent variegated-leaved varieties of H. HELIX.—*Argentea major*, a remarkably fine variegated tree ivy. *Argentea minor*, similar to the last, but with smaller leaves. These are counterparts of the marginate varieties in section *B*, but as they cannot be placed in that section, because of their arborescent character, they are not regarded as marginate, but as silver leaved ivies, and thus their names separate them from the group to which, by their colors, they are closely related. *Sub-lutea*, the counterpart in a climbing form of sulphurea in section *B*. *Aurea*, a splendid variety, with rich golden variegation, counterpart in a climbing form of chrysophylla in section *B*.

HEDERA GRANDIFOLIA (Hibberd), the large-leaved African ivy. H. Canariensis, of Wildenow, H. Hibernica, of gardens. The pedicels and calyx are covered with white stellate hairs, which have from thirteen to fifteen rays each.

A. Scandent green-leaved forms of H. GRANDIFOLIA.—*Grandifolia*, the common Irish ivy. *Viridis*, "Algeriensis" of gardens, the leaves light green with cuspid lobes, or nearly entire; usually regarded as a species, but undoubtedly an Irish ivy, in a state intermediate between the true climbing and the true fruiting habit.

B. Scandent variegated-leaved forms of H. GRANDIFOLIA.—*Variegata* a new, scarce, handsome variety, the glossy leaves richly margined with primrose yellow. *Pallida*, well known in gardens as the "golden-blotched" ivy. *Maculata*, a fine variety, the leaves of which are uniformly blotched and spotted with yellowish gray variegation. *Canescens*, known in gardens as "Algeriensis foliis variegatis."

C. Arborescent green-leaved forms of H. GRANDIFOLIA.—*Arborescens*, the common fruiting form of the Irish ivy. *Cordifolia*, a variety with thick-textured cordate leaves. *Cuspidata*, a tree-like variety with cuspid lobes.

D. Arborescent variegated-leaved forms of H. GRANDIFOLIA.—*Flava*, a fine variety with rich yellow variegation. *Striata*, the leaves striped and blotched with yellowish creamy variegation.

HEDERA CORIACEA (Hibberd), the thick-leaved Asiatic ivy. H. colchica, of Koch, H. Rœgneriana of gardens. The pedicels and calix covered with two-lobed scales, the lobes divided into seven to ten segments.

A. Scandent green-leaved forms of H. CORIACEA.—*Coriacea*, known in gardens as "Rœgneriana" and "Cordifolia."

B. Scandent variegated-leaved forms of H. CORIACEA.—Hitherto I have not met with a variegated form of the thick-leaved ivy, nor has a single variegated leaf occurred amongst a number of plants submitted to every variety of treatment.

C. Arborescent green-leaved forms of H. CORIACEA.—*Dendroides*, this name is adopted to distinguish it from the arborescent form of H. grandifolia. It is a remarkable ivy, resembling in growth a rhododendron or an evergreen cerasus more than any ivy of the prevailing type.

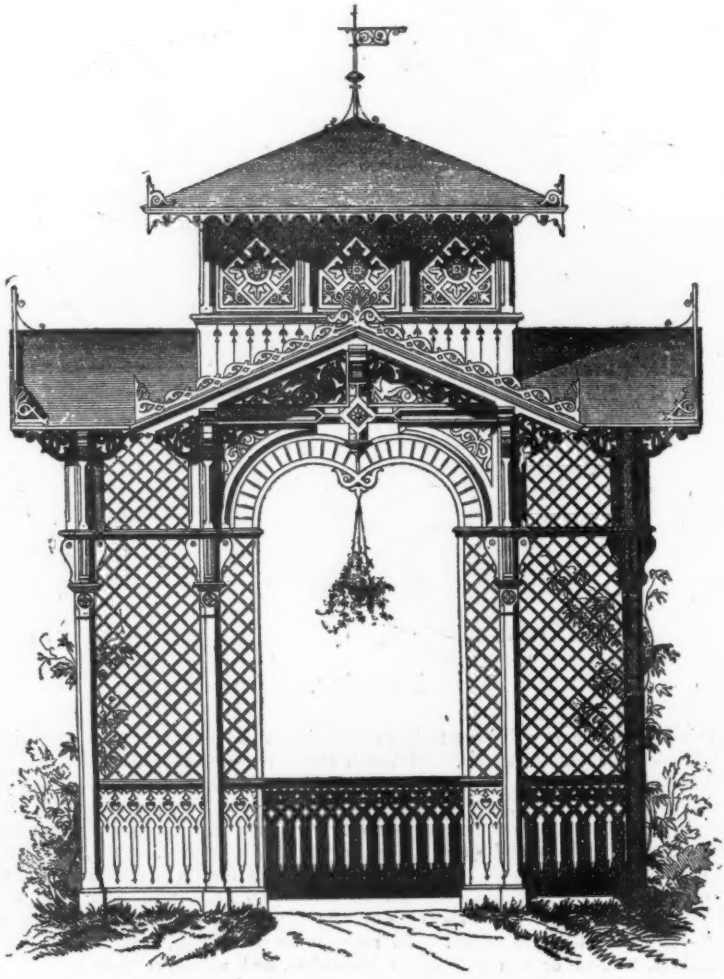
D. Arborescent variegated-leaved forms of H. CORIACEA.—None.

A Chat about Pansies.

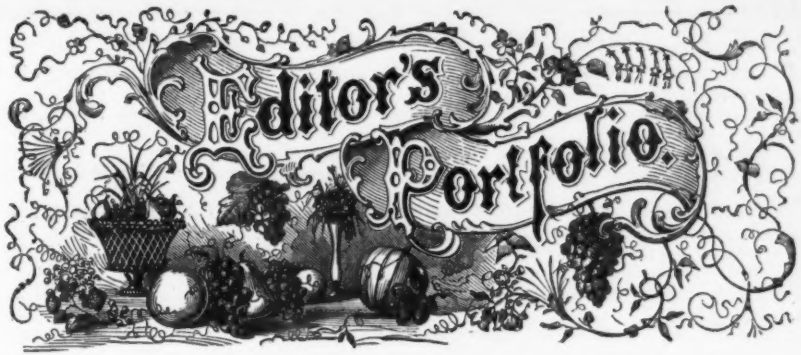
THE violet *tri-color*, some years ago, was considered a strictly florist's flower—that is, the florist was the only one who took pleasure in perfecting its form and color, and increasing its size. These were the days of the old-fashioned wild Pansy, or *three faces under one hood*, as they were commonly called. Now the florists, in the vicinity of the cities, raise the finest improved varieties by the hundred thousand, and find a ready sale for them at prices varying from one to three dollars a dozen. The cultivation of the Pansy is remarkably easy; they like a rich sandy loam, mixed with plenty of decomposed cow manure, and during dry weather they require to be protected from the scorching rays of the sun,—with plenty of water. Liquid manure will be found very beneficial if the soil is poor. This may be made of guano, horse or cow droppings mixed with water and carefully run between the plants. When planted in a moderately shaded place they will remain in bloom nearly all the season. If they show symptoms of running out, by over-blooming, they should be cut off a few inches above the surface of the ground; this will check their growth for a while and allow them to form new roots and wood, and thus recuperate them. By this means they will bloom freely during the fall months. Pansies are propagated by seed, cuttings, layers and divisions of the root. When saving seed, select the largest and finest formed flowers. Sow the seed in August for early flowers, and September for late. When we have a very choice variety that we wish to perpetuate, we make cuttings of the young wood; these are planted in shallow boxes, filled with fine sand, placed in frames and shaded from the scorching rays of the sun, care being taken not to give too much water, as when this is the case there is danger of their damping off. Layering, for the novice, will be found less troublesome. Take a few pint pots, filled with compost, and plunge them in the ground as near the old plant as possible; an incision next to a joint will be necessary. In the young shoot this will cause it to form roots more readily than when not cut. In

Pansies.

making this cut great care will have to be exercised to avoid cutting the shoot entirely off. Layers will root in about six weeks. Although Pansies are comparatively hardy, yet they are much better if protected. Glass frames are to be preferred; yet we have used board covers, and canvas, well oiled, tacked upon wooden frames, will last for some years. If the plants attain a good size before cold weather sets in, they will bloom all winter when protected from the cold winds and snow. The criterion of a good Pansy is, first, the form, which is the most essential point. To be perfect it should form a complete circle, without a notch or indentation; the petals should be large and broad; the eye clear and well defined; the colors rich and vivid, and of a velvety texture; the size not less than an inch and a half—if two inches, the better. All ragged notched edges, crumpled petals, indistinct markings, flushed or run colors, are blemishes, and whatever may be the ground color, the principal color of the three lower petals should be alike, whether yellow, white, blotched, plain or fringed, and whatever the markings or penciling on the ground color may be, they should be bright and distinct, and retain their character without running or flushing with the ground color.



Design for a Summer House.



Editorial Notes.

Selection of Fruits for Family Gardens.

It would be well for all planting gardens this spring to *start right* by having a choice selection of varieties of fruits and vegetables already tried and known to be excellent. We herewith give such a list:

Asparagus.—*Conover's Colossal.*
Rhubarb.—*Victoria, Linnæus, Downing Colossal.*
Gooseberries.—*Houghton's Seedling, and Downing's Seedling.*
Currants.—*Versailles, Red Dutch, White Grape.*
Red Raspberries.—*Clarke, Brinckle's Orange,* if well protected; *Franconia, and Hornet.*
Black Cap Raspberries.—*Mammoth Cluster, Seneca, Davidson's Thornless, Doolittle, Westchester.*
Strawberries.—*Wilson, Barnes' Mammoth, Jucunda, Triomphe de Gand, Charles Downing, Boyden No.* 30, *Napoleon* 3d.

Make Your Trees Branch Low.

Train your pear trees for garden or even field use, so that they will branch at a distance of one to two feet from the ground. The advantages are easily enumerated:

1st.—It is easy to trim.
2d.—It is easy to gather the fruit.
3d.—Falling fruit is little injured.
4th.—All branches being sturdy, will not be strained by over-bearing or over-weight of fruit.
5th.—Soil will be kept shaded and moist.
6th.—Trunk will be protected from the scorching sun.
7th.—Tree will grow more and more beautiful.

Protecting the Trunk of Trees Against the Sun.

The training of the branches of trees low, in a pyramidal form, is one of the most effectual plans of shielding the trunk against the ill effects of the sun. Where trees already have high branches, a board adjusted to shield the bark from the midday sun will be found useful. A western cultivator, trying this once, states "that since he tried it he has lost no more trees, and the bark on that side remains as smooth and as soft as on any other part of the tree."

The Best Markets for Fruit Growers.

A fruit grower at Grand Haven, Mich., who shipped last year to Chicago

300 bushels of Strawberries,
200 bushels of Raspberries,
500 bushels of Blackberries,
200 boxes of Pears,
150 barrels of Apples,
2,500 boxes of Peaches,

states that he has generally found the *village markets* the best. The city markets get too frequently overstocked, and fruit could not be sold before it spoiled. Hence fruit growing is better for inland towns and villages than for large cities.

Ornamental Trees and Shrubs for Small Grounds.

Cottage Gardeners desiring trees or Evergreens for ordinary planting, such as *will grow*, will find this list a help:

EVERGREEN TREES.—*Norway Spruce, Hemlock Spruce, Silver Fir, Scotch Pine, Austrian Pine.*

HEDGES.—*Privet, American Arbor Vitæ, Norway Spruce.*

EVERGREEN SHRUBS.—*Chinese Arbor Vitæ, Irish Juniper, Tree Box, Yew, Siberian Arbor Vitæ.*

DECIDUOUS TREES.—*Sugar Maple, Silver Maple, Scarlet Maple, Tulip Tree, Horse Chestnut, Magnolia Macrophylla, Oak-leaved Mountain Ash.*

WEEPING TREES.—*European Weeping Ash, Everflowering Weeping Cherry, Cut-leaved Weeping Birch, Weeping Linden, Kilmarnock Weeping Willow.*

SHRUBS, LARGE FLOWERING.—*Magnolia Conspicua, Lilacs, Snow Ball (viburnum), Althea, Syringa grandiflora.*

SHRUBS, SMALLER SIZE.—*Japan Quince, Forsythia, Barberry, Tartarean Honeysuckle, Deutzia, Spiræa, Jasmine, Calycanthus.*

These are sufficient for a beginner. As horticultural taste and information become more extended, other new, rare and beautiful specimens should be added.

Seed Business of James Vick.

THE *Rural New Yorker* states that Mr. Vick's business has increased beyond all precedent either in Europe or America.

He occupies as a warehouse a building eighty by one hundred and twenty feet, four stories high, entirely devoted to the filling of orders for seeds and bulbs. In the busy season some seventy-five young ladies are employed in the various departments, while thirty men assist in the more laborious part. The sales reach several hundred thousand dollars per annum, while the letters received, varying from nine hundred to eighteen hundred per day, are about one-quarter received at the Rochester post-office, and require from four to six persons steadily to open and fill orders, as many more being employed in answering correspondence. The seed farm comprises fifty acres, devoted to bulbs, etc., of which ten alone are in Phlox Drummondii and ten in Tomatoes. The editions of his Catalogue reach 120,000 per annum, and advertising nearly $10,000. THE HORTICULTURIST can claim the honor of his name as one of its former publishers.

Best Methods of Planting the Strawberry.

FOR market, plant two and a half by one ft. For family use, two ft. by one. Invariably cultivate on the hill system. Cut off all runners. Give every hill a good shovelful of manure at time of planting. Cultivate to keep down weeds. Mulch in winter. In time of drouth do the same. Renew plantation every third year, and crops will come and berries as big as are wanted. *An acre well tilled makes a purse well filled.*

"A Pleasant Look."

SUBSCRIBERS, as they renew their subscriptions, often remark that THE HORTICULTURIST always has a *pleasant look*.

Yes, indeed; it has many pleasant friends, and many are the hours of pleasure the editors in years gone by have devoted to it.

A pleasant look often decides at the outset the success of a Journal, and the brighter the face without and the warmer the *heart within*, the greater will be its popularity.

"Long may it live" and "*greener still its memory.*"

Green Prolific Strawberry.

PROBABLY no strawberry for family use is more productive than this, and on sandy lands it is even superior to the old well known Wilson, producing frequently twice and thrice the quantity of the former. It is too soft for market, but of favorable qualities for a home demand. It is a little acid, but not as much so as the Wilson. We observe Southern growers commending it highly, as of good size, solid and handsome, unaffected with severe drouth, "resisting the sun's rays like a salamander." One grower states that it is the most successful out of forty-two varieties in his possession.

The Western Pomologist.

THIS is a new publication devoted to the horticultural interests of the West, published by Mark Miller of Des Moines, Iowa, price $1 per annum. Mr. Miller has been favorably known to the public through a series of years of editorial connection with many of the most prominent agricultural journals of the Western States, and is fully capable of appreciating the necessities of Western readers.

New journals, exclusively horticultural, have hard work to establish themselves, and need the kindest sympathies of the press to encourage them. We greet our Western kinsman with cordial good feeling, and trust "*its shadow may never be less.*"

Delivery of Premiums.

We shall commence sending off premiums of Roses, etc., on the 15th of April, and continue until the 15th of May. Better plants can be obtained about the 1st of May, than at any earlier date, and we wish nothing sent but will be of superior merit, and become perfectly satisfactory.

Berry Baskets Too High.

The conviction is general among small fruit growers that the prices of first class berry baskets are much too high for the low profits and uncertainties of the business of growing fruits for market.

With many basket makers, where hand labor is used principally, we cannot expect a very great reduction, but where baskets are turned off by the tens of thousands by machinery we certainly think it is fully time to reduce prices to a *living level*.

We speak from personal knowledge, that in many cases there is no reason for the excessive rates, and the profits of some manufacturers too large.

A president of one large company, in response to our inquiry as to the actual cost per M for making, said that the actual cost was but $2.50 to $3, while the retail price was $25 to $30. Here is a profit of one thousand per cent the fruit grower is obliged to pay to his basket maker, and too many know it is the hardest money they ever paid in the world. We believe a really good basket is worth $15 per M, and no one should grumble at such a price; but over this is too high altogether.

Protecting Evergreens during Winter.

Several years since H. W. Sargent contributed to one of our horticultural journals some valuable facts concerning the effects of close planting and protection of Evergreens during the winter. We have thought of it often since then, and reproduce here the most important portion:

"The writer starts with an assertion which upsets the theory of close protection altogether, namely, that those things protected or sheltered the most, have suffered the most. All things planted on the west side of a wood have been the next greatest sufferers, from the fact, he thinks, that they are in shadow (in any place) up to 10 or 11 o'clock, and then suddenly receive the warm rays of an almost meridian sun, while the sap vessels are in a frozen or congealed state of an excessive low temperature of the preceding night; while trees on the east side of a wood receive the early and weak rays of the rising wintry sun, and the congealed sap vessels are thawed gradually and without much or any harm.

"As a proof of this, he mentions a specimen of Wellingtonia, thirteen feet high, feathered to the ground, standing on the west side of a plantation, every branch dead to within six inches of the top, while, on the contrary, another specimen nearly as large, standing in a most exposed position with no protection near, but receiving the early rays of the morning sun, was so little damaged that at a little distance it could not be observed. Another specimen, Pine's Lam Certiana, fifteen feet high, had not a single green leaf on it in August; buds, though plump and green, had not bushed, wearing the appearance of being completely paralyzed. This on the west side of a wood. A similar tree on the north side of a wood untouched. Trees protected on the east side and receiving the sudden rays of the mid-day sun, have either nearly all died or suffered so much as to render them nearly worthless. Those immersed in a wood and protected on all sides have generally died. Those planted on the north side of a wood have hardly suffered at all. Those on the east side of a wood very little. Those on the west side very much. It appears from this, that if trees have too much shelter the wood will not ripen well in the autumn, and are consequently more liable to damage from frost. That a shelter to break the force of the wind should be at a sufficient distance to allow of plenty of air and sun getting at the trees, or better without any.

"The conclusion to be arrived at from the writer's experience is, never to plant any but the very hardiest tree on the western or southern side of a wood or plantation. The north or east, or even an open location is better."

We find nearly a similar result in fruit trees or vines. We have seen blackberry vines on the south side of a close fence entirely winter killed, while on the north side, not a yard off, entirely uninjured. Apple trees and pears, on hills exposed to winds, have lived and borne fruit regularly, while in the valleys beneath they have suffered from the frosts. Hence, among horticulturists, it is considered quite desirable to have a *free circulation of air*, as well as protection against our most damaging winds.

Horticultural Societies.

An unusual degree of activity and interest seems to have attended the fall and winter meetings o nearly all our principal State Horticultural Societies, and from the reports of their proceedings forwarded to us for our notice, we observe there has been elicited a vast amount of really useful information.

The Illinois Horticultural Society

Has been more successful than usual. Its meeting was well attended, and its finances are "*above par.*" Consequently we have great reason to rejoice. We give them great credit as the most practical and enterprising horticultural society in the entire country.

The Wisconsin Horticultural Society,

Under the persistent efforts of the President and Secretary, and also the help of the *Western Farmer*, has also been quite revivified, and created a redoubled interest in horticultural subjects. The officers for 1870 are Joseph Hobbins, M. D., President; O. S. Willey, Recording Secretary; and F. S. Lawrence, Corresponding Secretary. In a country so fine, and among a class of people of so excellent taste and abilities, a horticultural society should be abundantly successful.

The Alton Horticultural Society, Alton, Ill.,

Is a genuine model, to which we can point with great satisfaction. Combining in one gathering both practical and scientific talent, with editorial abilities and assistance of the highest character, the interest of the meeting seems never to flag for an instant, and we doubt whether in so short a time any organization has ever gained so wide and so worthy a reputation.

The Western New York Horticultural Society

Held its annual meeting at Rochester in January of the present year, and with far greater interest than ever. Active part was taken by all our prominent nurserymen in Central New York—Barry, Maxwell, Sylvester, Babcock, Hooker, Smith, Hoag, Ellwanger, Frost and others. The discussion on apples, pears, grapes and small fruits was quite full and entertaining. The Society has made an excellent reputation, and is in a locality where it can command at all times an abundance of practical ability to sustain it.

The New York State Horticultural Society.

We have received circulars from eminent nurserymen in the centre of this State, proposing to form a State Horticultural Society similar to those already in existence in Illinois, Massachusetts, &c.

We second the proposition most heartily, and do not doubt that it can be made without a rival in practical influence. While there is such a large number of active horticulturists in our large State, there will be abundance of material to make its meetings and discussions the most valuable in the entire country. We do not think it will be possible to obtain any aid or assistance from the Legislature, although it is their duty to encourage horticultural progress as well as public agricultural institutions.

Geneva Horticultural Society.

This young association, only organized within a late date, has held several successful exhibitions, and gathered a large concourse of appreciative listeners at their gatherings. Geneva is second to no other place in the country for the number of her acres devoted to nursery products, and with such well known names as Graves, Willard, Maxwell, Smith, Herendeen, Bronson and others, we see no reason to doubt that an influential organization can be permanently maintained.

Hints and Helps to Cottage Gardeners.

BY THE EDITOR.

Experiments with Peas.

From seeds presented to us by James Vick, of Rochester, N. Y., and also by the Commissioner of Agriculture, we make the following notes of our experiments last season:

McLean's Little Gem Pea is of very dwarf growth, growing in a cluster close to the ground, and not over eight or ten inches high. Pods are small, but well filled with plump-sized peas of delicious flavor; is not valuable for market purposes, but is worth cultivation in the home garden, both as a curiosity and for flavor; is the best and most productive of all dwarf peas we have seen.

Dan O'Rourke Pea has had a very extensive cultivation and sale for the past three years for market and family use, and has been considered the *staple early variety*. But we think its day is, or ought to be, over. We find it fairly productive, and does not need much staking, but is of so poor quality that we have discarded it altogether for future use in the home garden. It is superseded by other peas of far better merit.

Landreth's Extra Early.—This is known in different cities, by different seedsmen, as the *Philadelphia Early, Extra Early,* &c., and nearly every other name but *the right one.* This pea is the result of years of experiment by the Landreths of Bristol, Pa., and has been tested by the side of every other pea now known to the American market. We do not see why others should refuse to give it due credit.

We purchased a parcel for trial, which were duly sown, and the produce gathered and tasted. The flavor is exceedingly sweet and delicious, cooking with plenty of well flavored juice. The plants are of compact, sturdy growth, about two and a half to three feet high, and very productive. In fact, the bushes seemed entirely covered with the pods, while the pods themselves were always well filled with fine plump peas. We found this variety excelling all other peas in productiveness and earliness, being ripe a week before the O'Rourke. As soil and climate differ with a great many varieties, we could not speak of the possibility of so good success in other parts of the country, but with us we have no hesitation in expressing the candid opinion, it is the best pea for early family use we have ever known.

Carter's First Crop is quite early filling the pods full with peas of excellent quality. The vines are of moderate growth, quite productive, and it seems among the most desirable of our recent importations from England.

Laxton's Prolific, Long Pod Pea, is hardly equal to the high commendation bestowed upon it. We do not find it of superior quality nor of very great productiveness.

Waite's Caractacus differs very little from the O'Rourke in desirability. It is not as productive as the latter, although a little better quality.

Champion of England.—The best *late* pea for family use. Flavor delicious, a very strong grower, fully six feet high, very productive, universally commended. It should find a place in every garden.

McLean's Premium is also a strong grower, but later than the *Champion of England.*

We have not tested all the prominent varieties as yet, but thus far our own personal choice is in favor of the *Landreth's Early* and the *Champion of England.*

Experiments with Vegetable Seeds in the South.

Dr. Swazey, of Yazoo City, Miss., has also been experimenting with seeds, and chronicles his results in his own journal, *The Southern Horticulturist:*

Bates' Early Sugar Corn.—Proved to be an early, productive and delicious variety of small-eared *red* corn, and from its color quite a novelty. As a *first* early sort it is desirable, but for the main early crop we decidedly prefer

Brills Early Sugar Corn, which ripens a little later, but is of equal excellence and productiveness, and is much larger. This is one of the best early varieties of sweet corn that we have ever tested out of a dozen or more. Indispensable to every amateur and market garden.

Early Wakefield Cabbage.—This, as usual, proved to be the best early variety, and should be planted extensively as the earliest good cabbage. The heads are small, but solid, tender and of excellent flavor, and as the plants can be set a foot apart in two feet rows, perhaps as large a weight of solid white heads can be raised of this variety as of those that are larger.

Epicurean Pea.—This is one of the most delicious peas that we have ever tasted, and was it a first rate bearer—which last year it was not—and the pods better filled, we should unhesitatingly pronounce it the best of its season, which is second early.

Bossin Lettuce.—A magnificent variety of the Cos family, and beyond all comparison the best of that class we have ever seen. Planted in March without extra manuring, many of the plants attained to a diameter of more than twenty inches and single leaves to over one foot in width! And its delicious tenderness remained unimpaired to the very last, even through the hot and dry weather of July. The flavor was as delicate as its texture, having scarcely a trace of that bitterness so common to the non-heading varieties. Of all lettuces this is our favorite; but we don't know where to get seed, as we can find it mentioned in none of our catalogues, and of the plants we left for seed, only *one* sent up a seed stalk, and that proved almost abortive.

Simons Early Blood Turnip Beet is much like the old Blood Turnip Beet, except being of a little lighter color and somewhat smaller.

Melons.

The *Cassaba* is a new variety introduced by the Department of Agriculture, and yet not generally known. A correspondent of the Department writing from Chico, California, in relation to his experiments with seeds, states that "several varieties of the cantaloupe seed produced melons which the world cannot surpass, the Japan White Cantaloupe, the Cassaba Cantaloupe and the Phinney's Early water melon being particularly fine. The Cassaba, imported from Smyrna, produced the finest melons ever grown on this continent, being as far superior to the choice Hunter melon as the latter is to the common musk melon. The whole appropriation made by Congress for your Department is repaid by the introduction of this one excellent variety of melon."

Goodwin's Imperial.—Another correspondent from Illinois tried it and reports as follows:

"The Goodwin's Imperial watermelon seed received from the Department March, 1869, was planted for trial. The melons are excellent. They were of medium size, round, light green, and with a very thin rind; flesh red, fine grained, and very sweet; seeds small and red, with black eyes. A few of the melons differed from the above description by being larger and of a dark green color. The Goodwin's Imperial is certainly the best watermelon I ever tasted. The only objections to it are that it is not quite so early as some others, the Mountain Sweet for instance, and for show in market it is rather small."

Phinney's Early.—A California correspondent of the Department writes concerning this:

"Phinney's Early water melon has done remarkably well, attaining a large size, and being of most delicious flavor; in fact, I may say I have found none to equal it, even here, where the melon grows to perfection, and where the varieties are very numerous."

Experiments with New Varieties of Peas.

A MICHIGAN correspondent reports as follows: Peas were all planted May 6th; the earliest were Carter's First Crop, five days earlier than the Philadelphia Extra; the Eugenia were the best flavored, and the Peabody the poorest eating; the Advancer—all the crop can be picked at the same time—very fine flavored; the Surprise and Leviathan yielded heavy crops of very large peas. The past season has been very favorable for peas; I never saw them yield heavier nor last longer.

Training of Tomatoes.

I HAVE tried this season seven different ways of cultivating and training the tomato, and like training to a single stake the best, as they ripened ten days earlier and yielded better than the others. The plants were set out the 21st of May, three feet apart, and manured with old barn-yard manure, and furnished with stakes six feet long, and trained according to directions given in the *American Agriculturist*, viz: The plant as it grows is tied to the stake. When the first cluster of blossom buds appears, the lateral shoots which appear in the axil of each leaf below it, are carefully pinched out, leaving but a single stem, surmounted by a cluster of flowers, and a bud which will serve to continue the stem. This bud will develop three leaves and a cluster of flowers, and all the axillary shoots upon it are removed, and the stem is kept carefully tied up; and so on. The vine is kept to a single stem without branches, and bearing only leaves and clusters of fruit. The vines, with the exception of two, grew to the top of the stakes, the first cluster growing within three inches of the ground, and the first ripe tomatoes the 25th of July.—*A Mass. Cor. of Co. Gent.*

Early Tomatoes.

IN my opinion, the extreme point of earliness in tomatoes has been reached years ago, and now all further improvement must be in point of size, smoothness and solidity; and that any one laying claim to have varieties a specified number of days or weeks earlier than those we already have, does so without having a knowledge of the subject, or with the desire to impose on the public. The tomato is a plant requiring at all times a certain high temperature to ripen its fruit; and though it may ripen in Georgia in May, in Virginia in June, in Delaware in July, or in New Jersey in August, it requires the same aggregate amount of heat to do the work. The same is true of most fruits and vegetables; we reach a certain point of earliness with a given variety in a given locality, when the temperature tells us we must stop. If improvement in earliness was progressive, we might have reason to expect that the radish or lettuce, which matures with us in the open ground here in May, would yet mature in April.—By Peter Henderson, in *American Agriculturist.*

Necessity of Pruning Raspberries and Blackberries.

IT stands to reason that any fruit tree or plant must get *well rooted* before being allowed to yield a full crop; and, too, it is an admitted fact that if any tree or plant is checked in its growth, it will throw out stronger and more side branches, and grow much more stocky; consequently it seems strange to me that any person who has had any *experience* in growing fruits should argue against trimming back raspberries. Now, we have simply *practiced both* plans, side by side, and know if they are not pruned they must be staked. The crop will not average half as much, the plant is but short lived, and it is impossible to get among them to work them out as they should be if left unpruned; while if cut back the first season to within one foot of the ground, and after that three to four feet (if the growth attains that height) they will be long lived, and yield immense crops every season.—*Countryman.*

Select List of Flower Seeds for Planting in Family Gardens.

THE following list was adopted by the Galesburg Horticultural Society, Ill.:

Asters.—Truffaut's new French peony flowered, Giant, Emperor, Peony flowered globe, New Victoria, German quilled, and Dwarf pyramidal bouquet.

Balsams.—Improved double rose-flowered, Camelia-flowered.
Delphinium.—Hybridum Novum, Chinese pumilum and Hendersonii.
Dianthus.—Heddewegii Diadematus fl. pl., Laciniatus, Chinensis, Imperialis, Heddewegii fl. pl., and do alba.
Lychnis.—Grandiflora gigantea.
Nasturtium.—Golden King of Tom Thumbs, King of Tom Thumbs and King Theodore.
Nemophila.—Maculata grandiflora and do purpurea, Atomaria ful. variegata.
Pansy.—King of the blacks, mixed English, German and French.
Petunia.—Buchanan's hybrid, Flore pleno (double) Marginata, Striatiflora, Countess of Ellesmere.
Phlox Drummondii.—Queen Victoria, Rosea Alba-occulata, Chamois Rose, Isabellina.
Portulaca.—Double rose flowered.
Rhodanthe (Everlasting flower).—Maculata atrosanguinea and alba, Manglesia Major.
Stock (Ten Weeks).—New largest flowering Dwarf, New largest flowering Dwarf, blood red.
Sweet Williams.—Hunt's Perfection, Auricula flowered, Double-flowering.
Sweet Pea.—New Scarlet Invincible.

Climbing Annuals.

Climbing Cobæa (*Cobæa scandens*).—A rapid growing vine of great value where immediate shade is desired,

Cypress Vine (*Quamoclit vulgaris*).—A plant with elegant cypress-like foliage; requires warm soil and exposure to succeed well; flowers of various colors, as scarlet, white, and rose.

Morning Glory (*Ipomæa purpurea*).—A well-known plant of much beauty and variety; flowers variously colored, but blue prevailing, more or less striped or margined with white.

Balloon Vine (*Cardiaspermum halicacabum*).—A fine growing plant, climbing by tendrils, chiefly ornamented on account of its inflated pods, which give to it its common name.

Calampelis Scaber.—A plant of rapid extension; foliage thin and scattered; valuable for partial shading; flowers tabular, orange-colored.

Lophospermum Scandens.—Equal to the Cobæa in rapidity of growth, and valuable where a large surface is to be covered in a short time.

Maurandea Barclayana.—A small foliaged graceful-growing plant, with trumpet flowers of various colors; the white variety very delicately beautiful.

Thunbergea Alata.—In rich soils this will make a good display; on dry light soils it burns out in dry weather; flowers orange, white, and yellow, with dark edge.—*Report of Com'r of Agriculture.*

Hardy Herbaceous Perennial Climbers.

Everlasting Pea (*Lathyrus latifolius*).—A very desirable Summer climber, very profuse in flowers; a much neglected plant.

Chinese Yam (*Dioscorea batatas*).—This plant, of which so much was expected as a valuable culinary root, has had the misfortune of at first being overpraised, and then underrated. It is, however, well worthy of praise for its mere ornamental beauty, as a covering for arbors, &c. It spreads with great vigor, covering a large surface in a few weeks; and while the roots are perfectly hardy, they possess the additional merit of affording nutritious food. A plant combining these qualities merits attention, and should not be consigned to neglect.

Virgin Bower (*Clematis*).—There are many species and varieties of this plant in cultivation, some of them with brilliant flowers, mostly of blue.

Passion Flower (*Passiflora incarnata*) and double Convolvulus (*Calystegia-pubescens*).—Both of these climbers, although desirable in a collection, are inclined to spread and to send up suckers from the roots so that they are apt to become troublesome in some situations.

Climbing Fumitory (*Adlumia cirrhosa*).—A native plant of very delicate foliage; requires to be grown in a shaded place where it can find support on a low trellis.—*Report of Com. of Agriculture.*

New Flowering Shrub.

Hydrangea Paniculata Grandiflora.

The grand panicle-flowered Hydrangea, or, as more often called, the Deutzia-flowered Hydrangea—because in many catalogues it is classed as Hydrangea *deutzifolia*—is one of the new but really valuable and desirable choice shrubs of recent introduction. The leaf is somewhat like a Wiegela and the growth generally more like that shrub than the Hydrangea, as it makes a rapid upright spreading growth, strong and vigorous, to about eight or ten feet high. It may, and should be, however, kept at from two to four feet high. Its flowers are borne on the ends of the present year's shoots, and vary in length from three or four to nine or ten inches. The lower buds of the panicle open first and continue until sometimes there are over one hundred flowers, pure white, on one panicle. It is not every new shrub that is specially desirable; but this is worthy a place in every garden. It blooms in July and August.—*Rural New Yorker.*

New Dwarf Hardy Evergreens.

At the last meeting of the Western N. Y. Horticultural Society, this subject called out prominent horticulturists. T. C. Maxwell named the *New Dwarf Norway Spruce*—also the dwarf pine. Some of the newer dwarf Arbor Vitæ had proved hardy and very ornamental. There was a great variety in the shade and color and in the form of the trees. G. Ellwanger named the *Abies Nordmaniana* as the handsomest of the new evergreens, and likely to prove extremely desirable. H. E. Hooker regarded the *Pinus cembra* as one of the hardiest and best of the pines of moderate growth—and he had seen the *prostrate Juniper* at the West, covering large patches of ground by its luxuriant growth, and presenting a fine ornamental appearance. G. Ellwanger named the *Chinese Juniper* as very hardy and quite handsome. Information being called for in relation to the Rhododendrons, several members said that the *R. catawbiense* was the only sort that had proved perfectly hardy.

Garden Culture of Strawberries and Raspberries.

Plant your strawberries in rows, two feet apart, and fifteen inches apart in the row. Keep off all runners as fast as they appear, and keep the ground stirred. Do not, however, permit your hoe to go nearer the plant than six inches, as you will injure the small roots of the plant if you do. Just around the plant pull all weeds, etc., with your hands. In October, late, put straw in between the rows, and in November all over the plants an inch or two deep. In the Spring, remove the straw from the crown of the plants, and let it remain under and around it until they are done bearing. Then remove the straw of one row into another, loosen up the soil, and put it back again. So on, until the whole bed is gone over. This will keep down nearly all weeds, and will keep the ground moist. But little work is then required this season, as you have only to keep off runners as you did the first year. If you desire the *best* results, permit no fruit to set the *first* year, by pulling off all blossoms as soon as they appear. After the second year you may allow the runners to take possession of every alternate row, and when it bears one crop let the runners, that same year after bearing, take possession of the other rows, and cut up for a path the old rows which have borne early in the following Spring. In this way one may have a succession of this best of all small fruits. For raspberries, in garden culture, set the plants three in a place, four feet apart in hills. Cut down to within three inches of the ground the year of planting, and when your plants are two feet high, pinch off the top shoot; and when the laterals are a foot long pinch them off. The next year these will bear a fair crop, provided you have kept them clean and the ground either loose or *mulched*. When they are done bearing, cut out the old wood, and when the new growth is three feet high, and the lateral branches a foot or two long, pinch off the end of all, and in this way you may avoid the necessity of stakes. Keep them no higher after this.—*Rural American.*

Notes from Our Contributors.

Girdling Trees to Produce Fruitfulness.

I think it is not generally known that *girdling* apple trees will cause fruitfulness. If so, the people here in Massachusetts, knowing the fact, have been blind to their own interest, to see hundreds of acres of orcharding barren of fruit for the last eight or ten years, with apples at six dollars per barrel.

Last fall a friend from a neighboring town called at my place, and being much interested in fruit, the conversation turned in that direction. In commenting upon the failure of orchards, he gave me an account of his experiments, in a small way, during the last year.

In the spring of 1869, his orchard, which is a young one, was full of bloom and promised a rich harvest. A gentleman, who happened to be stopping with him at the time, told him that if he would have a crop of apples he must *girdle* his trees. The idea seemed preposterous, and the owner urged that to girdle them would kill the trees. But the gentleman insisted that that was the only way by which he could get a crop, and that he would pay for all the trees that were injured by the operation. But my friend being a cautious man, and not daring to venture far on untried ground, simply girdled a branch or two here and there, which he thought might be cut away in case the girdling proved fatal. But to his surprise the girdled limbs immediately commenced forming a new bark where the old one had been removed. The blossoms on those branches set fruit, and in the autumn bent under the weight of luscious apples, while those trees and branches not girdled scarcely produced enough fruit to pay for picking.

He also tried the experiment in the garden of one of his neighbors, which he was cultivating. In the centre of the garden was a large tree which the owner desired him to remove to the wood-pile. The tree had for years loaded itself with bloom, but never with apples, and had been suffered to remain, hoping that the next year it might prove fruitful. My friend urged that it might have one more trial. The tree was girdled and allowed to stand. The result was sufficient to satisfy the heart of any novice; the branches bent to the ground with the weight of fruit.

And now for the experiment that was tried at Benton Harbor, Mich., last spring, when a large orchard of fifteen hundred trees were girdled by an enemy, to destroy the orchard; which, on the contrary, caused it to produce such a crop as was never before known in that region.

So confident am I of its practicability, that I intend girdling an orchard of a hundred trees next spring, should they show signs of bloom.

I hope some one will try the experiment upon pears as well as apples, and give us the result through the columns of your magazine.

I would state that to girdle before the sap starts would prove fatal. The operation should be performed when the bark will slip. Yours, JOHN F. JOHNSON.

NORTHBORO', *February* 14, 1870.

Pears in Connecticut.

The Bartlett.—In the valley of the Connecticut I have seldom seen a tree of this variety that did not amply satisfy its possessor. Our soil is the red sandstone, or generally a deep strong loam. On an orchard I planted one acre of pear trees; this variety occupies one fourth the area, and has thus far returned at least three-fourths the profits. The trees have been moderately vigorous, healthy without exception, and highly productive. Thinning, of course, must be resorted to—taking out every imperfect specimen (nothing pays better); thus a crop matures on the tree, every specimen of which is worthy of a place on a retail stand at the highest price.

There is no danger of barrenness in this variety. With good cultivation and moderate manuring, just to secure a healthy growth every year, the result is as sure as a crop of corn or oats. If anything is to be dreaded with this variety, it is excessive growth, if over-manured or over-bearing. Bartlett pears once set, are sure to remain, unless thinned out; therefore thin out remorselessly early in the season, and as a reward there is double the value of fruit, with trees in good condition for the future.

The value of the Bartlett pear, as a fruit for canning, is universally known and needs no comment. Its value in market, and its value on the table, is too well known to need a word of commendation. As an orchard crop it is surely remunerative. Every man who owns a rod of land should have good home supply of this delicious pear.

The Talmage Pear.—Among the new pears claiming attention now by the public, is the pear bearing the above name. Its origin is Northford, Ct., and was a chance seedling in the garden of Levi Talmage, Esq. The tree has a remarkably vigorous habit of growth, always maturing its wood, and may be justly regarded as hardy and vigorous. The fruit ripens with the Seckel, which it much resembles. The Talmage, being a little larger and more uniform, is almost identical in form, with the same russet ground, but perhaps a little less ruddy coloring. The flesh is whitish, very juicy and melting, closely resembling the Seckel, but I think slightly inferior to a No. 1 Seckel. The tree is an early and abundant bearer, well suited to the orchard. P. M. AUGUR.

MIDDLEFIELD, CT.

Wisconsin State Horticultural Society Annual Meeting.

THE Society convened in the Historical Rooms, at the city of Madison, Tuesday evening, Feb. 1st, President Joseph Hobbins in the Chair.

The President read his annual address, congratulating the members upon the success of their last exhibition and the great want of more room on future occasions, the necessity of the committee on nomenclature prosecuting their work with more energy, and advised discarding from the list for competition all unnamed or wrongly named sorts; urged to prosecute with vigor the enterprise so favorably begun in the experimental garden; denounced tree peddlers and the indiscriminate planting of untried sorts; urged the planting of Siberian varieties, as the sure road to success, and the planting of something better. He said, this is what I call beginning at the right end—at the bottom, and not at the top of the ladder. Let us teach people to grow that which they can grow with a certainty, and afterwards they will learn to select for themselves. I would *educate up* from the Siberian, and not as is so often the case now, down to nothing.

This was intended especially for beginners, and even some long in the orchard have come back to the foot of the ladder and are working up our men. He urged the appointment of a State Entomologist, and showed the need of an appropriation from the State to aid in the enterprise; said that this is pre-eminently an agricultural State; that it joins hands with horticulture at every farm house; insisted that this Society is far in advance of any other State society in its efforts to spread horticultural knowledge, and referred in terms of praise to the fact that this was the only society which was conducting an experimental garden.

The address was listened to attentively.

Following this, the Secretary referred to the peculiarity of the season as affecting many of the small fruits; paid a tribute of esteem to the help we derived from horticultural journals; mentioned the increase in the number of journals devoted either in part or wholly to the horticulturist's interests; inferred the demand was equal to the supply, thus giving token that horticulture is progress-

ing; thought the danger of the times consisted in the discrimination of new varieties untried, and naming new fruits unworthily; urged the continuance of the experimental garden, as being one of the strongholds for the ultimate success of horticulture in the State, and said there is great good in store for our labors. Shall we put our shoulders to the load, and with our joint action resolve that the sons of Pomona in the Badger State will lead the van in the successful organizing and carrying out an experimental garden? A State like ours needs just such a garden, a place where every known fruit, vine, and especially the small fruits, may be tested, not so much for profit, though in time it may grow to be a source of income, but particularly as a source of information to those who would be encouraged to plant orchards and ornamental trees if they know what to plant. Another reason for requiring the continuance of this work is that we may have some place where all the old and new sorts may be congregated, worked in some manner so that they will fruit at the earliest possible moment, and by comparison of sorts very much can and would be done to correct the nomenclature of our present list, and these lists so corrected should become the authority of the State. This garden in time should grow to an influence of no mean proportions. Imagine for a moment a thousand varieties of apples growing there, five hundred of pears, one hundred or more plums, and as many grapes and strawberries; not to mention other fruits, ornamental trees and plants. With a managing committee of say three of your best pomologists and botanists whose duties it should be to visit as often as might seem necessary, the garden, comparing the various fruits and noting its progress and condition. Will any one present say that such a work is not worthy your best efforts? Might it not become a labor of love of this society and the pride of the State, to which other States may point with envious pride? Still another benefit, and one which to my mind is of incalculable benefit to the State is, the influence it would have upon the young men, students, who will see with honest pride the fruit resources of their State, and in their leisure learn to study its development, from this the fruit sections or localities of their own homes, and when they leave their college life they have learned what the books do not teach—practical horticulture. Its effects will be known and read of all men in the renewed activity in tree planting.

The exhibition of fruits was very fine, consisting of apples, pears and grapes, in all about three hundred plates. We never saw finer specimens and well kept. The Siberian crabs are shown in quantity, and being a novelty at this season of the year, drew much attention.

Mr. McAfee, of Freeport, Ill., shows a Lignarium representing the timber growth of Stephenson county, Illinois, consisting of forty-nine genera and about one hundred and fifty species. This has attracted a good deal of attention, and was the subject of a short paper in which the uses and abuses of the different timber was named. The example of Mr. McAfee in this collection is worthy of praise, and well may be followed by students in botany. Every horticultural society should have its Lignarium.

Five local societies were represented, and all reported in a prosperous condition. Three others are in working order in the State. The question how to increase their usefulness and to make them more efficient auxiliaries to the State Society, elicited a very spirited discussion, and resulted in the resolve to hold a summer exhibition in the strawberry season.

Mr. Scofield, of Illinois, read a paper strongly urging the necessity of united action on the part of all horticulturists, especially those of the West, to secure by exemption from import duties foreign trees, plants and seeds. He referred to the necessity of replenishing our forests or planting new ones; instanced with what rapidity many sorts of timber grew upon the Western soils, and thought it the duty of every society to take such measures as would tend to cheapen the production of young plants; compared the native with the foreign sorts; thought the European larch most valuable, as it was a very rapid grower, durable and hardy; in four years are valuable for posts, and in ten years will make from two to four posts. American larch grows on low ground, while the European grows on high ground, which adds to its value.

G. Emerson, of *The Western Farmer*, read a paper on "The Production of New Varieties." He said this was accomplished by three methods—selection of native varieties, new seedlings, and by hybridization. Thought that while rapid growth was desirable, it was not a sure indication of ultimate value; for the West, hardiness and productiveness are qualities that should be first watched for; thought all horticulturists who had novelties to sell were not reliable; that the experimental garden afforded a fine field for usefulness to this Society.

A very interesting discussion followed upon the production of hardy sorts and the stock to be used. The cultivation of the crab for root grafting was recommended. Mr. McAfee thought that the impression sought in the improving process is to be provided by the conditions of the parent. We should subject the parent plant to a severe course of discipline by exposing it to all the vicissitudes of heat and cold, by which process we would arrive at the value of fruits of Northern origin.

I have not time to touch upon all the valuable papers and discussions which were presented at this meeting. There were many papers and reports from different committees, all able and valuable, and will form their part of a published volume of transactions. Altogether, it was much the best meeting of fruit growers that ever assembled in Wisconsin, and the Society now occupies a position quite satisfactory to its founders and all interested with it at the present time.

WISCONSIN. O. S. WILLEY.

A Profitable Apple Crop.

We have just closed out the last of our apple crop, netting, from forty-eight Smith's cider apple trees, the sum of six hundred dollars. The same trees netted about the same amount three years ago, making a return of twelve hundred dollars for one acre of land in three years. The above trees were grown from suckers, and are about thirty-five years old.

Titusville, N. J. Blackwell Brothers.

Editorial Notices.

Notice of Removal.

The office of The Horticulturist, on and after May 1st, next, will be permanently located at No. 5 Beekman street, rooms 5 and 6, first floor. The new offices are in a desirable location, and very convenient of access, being but a few steps from the street.

Perry's Scarifier.

F. L. Perry, of Canandaigua, N. Y., has invented a cultivator, especially adapted to the use of nurserymen, small fruit growers, vineyardists and seedsmen, intending to produce a thorough stirring of the soil, deep cultivation, ease of draught, and easy adaptation to different crops and width of rows. We believe it a valuable implement, and think it will be found, by all cultivators, one of the most thorough and serviceable implements of the kind yet introduced.

Fruit Preserving Houses.

In nearly every device for the preservation of fruits, without decay, for any period beyond that of natural ripening, there has been something wanting to preclude absolute success. Wherever there is *moisture*, there must be *decay*, and hence *dryness* as well as *coolness* are indispensable. The Rees & Houghton new method of preserving fruit, vegetables, meats, etc., is an advance in the right direction, and as a committee of the American Pomological Society, after an examination of it, express themselves well satisfied with the results, we shall watch it with interest for future developments of its practicability.

Washburn's Catalogue, published by Washburn & Co., Boston, Mass., for 1870, has been laid on our table. We have always admired the excellent taste with which it has been compiled, and the neatness of its typographical appearance. The contents we know are trustworthy, and the novelties described are recommended with care and true judgment, according only to their real merit. Such catalogues as these deserve to be highly appreciated, and found in every garden in the country.

Manning's Descriptive Catalogue of Fruit Trees for 1870, by J. W. Manning, of Reading, Mass., appears in an improved form, and well illustrated.

Curtis & Cobb issue a very handsome and well illustrated catalogue of flower and vegetable seeds, comprising nearly 150 pages. The publishers are entitled to great credit for their useful volume.

John Saul, of Washington, D. C., has fairly eclipsed all other catalogue makers, in the elegance of his frontispiece, a colored lithograph of the new pelargonium, Andrew Henderson. The catalogue comprises over seventy pages of closely printed matter, with descriptions of many new and valuable novelties, and is worthy of more than usual notice.

Transactions of the Mass. Horticultural Society, 1869.—The Society continues in excellent financial condition, and its various exhibitions have been well attended. The most valuable part of the volume is the *report* of the fruit committee, by W. C. Strong, which we think is the most valuable ever written. It is exceedingly interesting, and does credit to Mr. Strong.

Olm Bros., in their Spring Catalogue for 1870, have introduced an illustrated frontispiece, exhibiting a plan for the improvement of ground connected with a country residence. With the exception of one or two curves, which a landscape artist might improve a little, it is excellent, and will give some good ideas to those about to embellish their grounds. The interior pages of the catalogue are well filled with new and choice illustrations.

The Cranberry Culturist, by F. Trowbridge, Milford, Ct., is a little pamphlet detailing the experiences of cultivators in Cranberries.

Landreth's Rural Register and Almanac, 1870, contains, in the last few pages, a choice of best varieties of vegetables for kitchen gardens, the best we have yet seen, being a record of personal experiments and tests.

Ellwanger-Barry Catalogues reach our table promptly, most excellently compiled and illustrated.

Mackenzie's Horticultural Establishment, Philadelphia.—His catalogue of plants, small and dainty, is the most elegantly printed list of the season.

Frost & Co.'s Catalogue.—We have received the catalogue of ornamental trees issued by the above firm, Rochester, N. Y. The illustrations are printed in a new and attractive form, with colored borders, which add greatly to the attractiveness of the catalogue.

Ferre, Batchelder & Co.'s Catalogue of Seeds is splendidly illustrated, printed with excellent taste, and contains an abundance of attractive horticultural information.

R. J. Halliday's Catalogue.—We have received his catalogue for 1870, containing descriptions of many novelties. We observe he has introduced the feature of special collections of plants for flower gardens and borders. The idea is excellent, and should be appreciated.

Catalogues Received.

Henderson & Fleming—Descriptive Catalogue of Vegetable and Agricultural Seeds.
Hargis & Sonmer, Quincy, Ill.—Cat. of Fruit and Ornamental Trees; Wholesale Catalogue, 1870.
Thompson & Adams, Brookfield, Mo.—Catalogue of Fruit and Ornamental Trees and Small Fruits.
J. M. Thorburn & Co.—Catalogue of Vegetable Seeds, 1870.
Storrs, Harrison & Co., Painesville, O.—Wholesale Trade List, 1870.
J. C. Plumb, Milton, Wis.—Trade List, Autumn, 1869.
Robert Douglass & Son, Waukegan, Ills.—Wholesale Catalogue Tree Seedlings.
Alfred Bridgeman & Son, 876 Broadway, N. Y.—Catalogue of Vegetable Seeds; Catalogue of Flower Seeds.
John Cadness, Flushing, L. I.—Greenhouse Plants.
R. H. Allen & Co., New York—Seed Catalogue.
Ellwanger & Barry, Rochester, N. Y.—Catalogue of Fruits, do. Ornamental Trees, do. Greenhouse Plants.
P. J. Berckmans, Augusta, Ga.—Catalogue of Fruit and Ornamental Trees.
Barler & Condon, Upper Alton, Ill.—Price List of Garden Seeds.
Hoopes, Brother & Thomas, Westchester, Pa.—Annual Trade List, 1870.
Calkins & Brooks, Bricksburg, N. J.—Price List of Nurseries.
James Draper, Worcester, Mass.—Catalogue of Small Fruits; Circular of Wauregan Raspberry.
H. B. Lum, Sandusky, O.—Catalogue of Small Fruits.
Vilmorin, Andrieux & Co., Paris, France—Catalogue of Novelties, 1870.
William Parry, Cinnaminson, N. J.—Catalogue of Fruit and Fruit Trees.
Hubbard & Davis, Detroit, Mich.—Catalogue of Greenhouse Plants.
Loud & Trask, Adrean, Mich.—Catalogue of Trees and Vines.
Storrs, Harrison & Co., Painesville, O.—Chestnut Circular.
Blackwell Bros., Titusville, N. J.—Catalogue of Fruit and Ornamental Trees.
A. M. Purdy, Palmyra, N. Y.—Wholesale Price List, 1870.
Dexter Snow, Chicopee, Mass.—Catalogue of Verbenas, etc.
W. F. Massey, Chestertown, Md.—Catalogue of Flowering Plants.
Henry A. Dreer, Philadelphia, Pa.—Garden Calendar, 1870.
Frost & Co., Rochester, N. Y.—Trade List, 1870; Catalogue Greenhouse Plants.
J. Wentz, Rochester, N. Y.—Catalogue of Fruits; Catalogue of Ornamental Trees.
T. C. Maxwell & Bro., Geneva, N. Y.—Trade List of Clematis, Roses and Soft-wooded Plants.
Lister Bros., Newark, N. J.—Circular of Bone and Fertilizers.
S. B. Fanning, Jamesport, L. I.—Price List of Choice Farm Seeds.
R. D. Hawley, Hartford, Ct.—Circular of Tomato.
Reisig & Hexamer, Newcastle, N. Y.—Circular of Seeds, Potatoes and Small Fruits.
Edward F. Jones, Binghampton, N. Y.—Catalogue of Scales.
S. L. Goodale, Augusta, Me.—Address on Commercial Manures.
G. E. Cleeton, New Haven, Ct.—Catalogue of Poultry Breeders and Fanciers.
Bennett & Davidson, Flatbush, L. I.—Spring Catalogue of New Plants.
Suel Foster, Muscatine, Iowa.—Catalogue of Nursery.
Jos. M. Wade, Philadelphia, Pa.—Price List of Fancy Fowls.
F. K. Phenix, Bloomington, Ill.—List of Fruit and Flower Plates.
Charles Arnold, Paris, Ontario, Canada.—Wheat Circular.
Hamlin & Barnum, Edgefield Junction, Tennessee—Trade List Cumberland Nurseries.
F. L. Perry, Canandaigua, N. Y.—Price List, Spring, 1870.
O. J. Weeks, West Webster, N. Y.—Price List of Plants.
W. S. Little, Rochester, N. Y.—Trade List, Spring, 1870; Mount Vernon Pear Circular.